UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,975	01/18/2002	Limin Li	STAN-216	5176

7590 06/29/2005

PIPER RUDNICK, LLP
SUPERVISOR, PATENT PROSECUTION SERVICES
1200 NINETEENTH STREET, N.W.
WASHINGTON, DC 20036-2412

EXAMINER	
FETTEROLF, BRANDON J	
ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 06/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/053,975	LI ET AL.	
	Examiner	Art Unit	
	Brandon J. Fetterolf, PhD	1642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-16,22-25,31,32 and 37-45* is/are pending in the application.

4a) Of the above claim(s) *7-16,22-25,31,32,44 and 45* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-6 and 43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Li et al.

Response to the Amendment

The Amendment filed on 04/26/2005 in response to the previous Non-Final Office Action (01/26/2005) is acknowledged and has been entered.

Claims 2-3, 17-21, 26-30 and 33-36 have been cancelled.

Claims 1, 4-16, 22-25, 31-32 and 37-45 are currently pending.

Claims 7-16, 22-25, 31-32 and 44-45 are withdrawn from consideration as being drawn to non-elected inventions..

Claims 1, 4-6 and 43 are currently under consideration.

The Terminal Disclaimer filed on 4/26/2005 has been reviewed and accepted.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Rejections Maintained:

Claims 1 and 43 **remain** rejected and **amended** claims 4-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement for the reasons of record in the prior Office Action (01/26/2005, pages 4-6) and for the reasons set forth below.

In reference to the previous action which held that the specification only reasonably conveys antibodies that bind to one species of polypeptide comprising a ubiquitination domain referred to as human TSG101 consisting of the amino acid sequence set forth in SEQ ID NO: 1, but not antibodies to any functional fragment thereof, Applicant's assert (Page 8) that the specification provides ample support for antibodies binding to any functional fragment of the ubiquitination-regulating domain of human TSG101. For example, Applicants submit that the specification provides the complete sequence of the ubiquitination-regulating domain of human TSG101 (page 24, last paragraph) and tested deletion mutants of human TSG101 (page 30, 2nd paragraph, and Fig. 3a). Thus, Applicants believe that with this information, one skilled in the art would be able to identify any functional fragment of the ubiquitination-regulating domain without undue

experimentation. Moreover, Applicants argue that the specification further satisfies the written description requirement by providing a sufficient number of species (i.e., the fragments listed on page 24, last paragraph of the specification) falling within the scope of the genus (i.e. the functional fragment of the ubiquitination-regulating domain of human TSG101). These arguments have been carefully considered but are not found persuasive.

First, the previous rejection was based on whether the specification reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed genus of polypeptides comprising an ubiquitination-regulating domain or any functional fragment thereof. Thus, while Applicants contend that the specification provides "ample" support for any functional fragment (page 24, last paragraph, page 30, 2nd paragraph, and Figure 3A of the specification), Applicants have not clearly established that they were in possession of any and/or all functional fragments. Although the Examiner concedes that the specification provides the complete sequence of the ubiquitination-regulating domain of human TSG101 (page 24, last paragraph) and deletion fragments of human TSG101 (Figure 3A), the specification does not appear to provide a written description for any and/or all functional fragments of a polypeptide comprising an ubiquitination-regulating domain comprising the amino acid sequence of SEQ ID NO: 1. For example, the specification provides a number of fragments (page 24, last paragraph) of the amino acid sequence of SEQ ID NO: 1. However, the specification does not appear to describe any structural features which are common to the individual fragments which would allow the fragment to function as presently claimed. Therefore, Claims 1 and 43 remain rejected and amended claims 4-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Amended claims 1, 4 and 6 **remain** rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (IDS, US 5,891,668, 1999) and claims 1, 4-6 and 43 **remain** rejected under 35 U.S.C. 102(b) as being anticipated by Brie et al. (US 5,892,016, 1999) for the reasons of record in the prior Office Action (01/26/2005, pages 6-8) and for the reasons set forth below.

In reference to the previous action which held that Li et al. (pages 6-7) teaches antibodies which specifically bind to the coiled domain, leucine zipper and proline rich domains of TSG101, Applicants assert that Li generally describes antibodies to normal or mutated forms of human

TSG101. In reference to the previous action which held that Brie et al (page 7-8) teaches antibodies to a purified protein having 100% sequence identity to the amino acid sequence set forth in SEQ ID NO: 1, Applicants contend that Brie generally describes the complete sequence of human TSG101 and antibodies that bind specifically to the polypeptides. Thus, Applicants submit that Li and Brie describe a genus of antibodies that bind to the full length human TSG101, while the present invention discloses a species of that genus (i.e., antibodies to the ubiquitination-regulating domain of human TSG101) and therefore, a genus does not always anticipate a claim to a species within the genus. Consequently, Applicants argue that since neither Li nor Brie disclose the ubiquitination-regulating domain of human TSG101, one skilled in the art would not be able to "at once envisage" antibodies binding to the ubiquitination-regulating domain based on the teachings of Li or Brie. Moreover, Applicants contend that the binding to the ubiquitination domain is not an inherent characteristic of the antibodies of Li or Brie because in order to establish inherency, Applicants content that "the Examiner has to demonstrate that the missing descriptive matter must be **necessarily present** in the prior art. In re Robertson, 49 USPQ2d 1949, 1950-1951 (Fed Cir. 1999)." (hereinafter "Robertson") Furthermore, Applicant's assert that antibodies to the ubiquitination-regulating domain are not necessarily present in antibodies that bind to the full length TSG101. As such, Applicants content that the mere fact that some anti-TSG101 antibody may bind to the ubiquitination –regulating domain is not enough to establish inherency. These arguments have been carefully considered but are not found persuasive.

First, the previous rejection was based on whether the prior art taught an isolated antibody that binds specifically to a polypeptide comprising an ubiquitination-regulating domain, or a functional fragment thereof, of a human TSG101 protein comprising the amino acid sequence of SEQ ID NO: 1. Thus, while applicants argue that the prior arts antibodies are to a genus of antibodies that bind to the full length human TSG101 (emphasis added) and not the species as presently claimed, Applicants have not provided a patentable difference between the antibody presently claimed and the ones disclosed in the prior art. In the instant case, the claims are drawn to an isolated antibody that binds to a polypeptide comprising (emphasis added) an ubiquitination-regulating domain, or a functional fragment thereof, of a human TSG101 protein comprising (emphasis added) the amino acid sequence recited in SEQ ID NO: 1. The transitional term "comprising", which is synonymous with "including," "containing," or "characterized by," is

inclusive or open-ended and does not exclude additional, unrecited elements or method steps. See, e.g., Genentech, Inc. v. Chiron Corp., 112 F.3d 495, 501, 42 USPQ2d 1608, 1613 (Fed. Cir. 1997) ("Comprising" is a term of art used in claim language which means that the named elements are essential, but other elements may be added and still form a construct within the scope of the claim.); Moleculon Research Corp. v. CBS, Inc., 793 F.2d 1261, 229 USPQ 805 (Fed. Cir. 1986); In re Baxter, 656 F.2d 679, 686, 210 USPQ 795, 803 (CCPA 1981); Ex parte Davis, 80 USPQ 448, 450 (Bd. App. 1948) ("comprising" leaves "the claim open for the inclusion of unspecified ingredients even in major amounts"). Thus, there does not appear to be a patentable difference between an antibody which binds to a polypeptide fragment (100% identical from amino acids 11 to 390 of SEQ ID NO: 1) of the amino acid sequence recited in SEQ ID NO: 1 (Li, US 5,891,668, see sequence comparison) or an antibody which binds to a polypeptide that is 100% identical (see sequence comparison) to a polypeptide comprising the amino acid sequence recited in SEQ ID NO: 1, wherein the ubiquitination-regulating domain may comprise amino acid residues 50-140, 1-140 or 140-250 of SEQ ID NO: 1. Moreover, while Applicants assert that the binding to the ubiquitination-regulating domain is not an inherent characteristic of the antibodies of Li or Brie, Applicants have not provided any factual evidence that the claimed product is different from the prior art. Furthermore, the Examiner agrees with Applicants assertion that the initial burden is on the Examiner to demonstrate that the missing descriptive matter must be **necessarily present** in the prior art. However, it does not appear that Applicants interpretation of Robertson is relevant to the instantly claimed invention. In Robertson, the Board found that the Board of Patent Appeals and Interferences improperly rejected an application claim for fastening and disposal system for diapers on grounds that the prior art reference inherently contained all elements of a claim, since the board failed to recognize that the third (emphasis added) mechanical fastening means of the application claim, used to secure the diaper for disposal, was separate from and independent of the two other means used to attach the diaper to the wearer (emphasis added), and since the boards theory that the two fastening devices in the reference were capable of being intermingled to perform the same function as the third and first the elements in the applications claim rest upon mere probability or possibility that is insufficient to establish inherency. Thus, it appears that the prior arts reference did not teach the three different mechanical devices. In the instant case, the claims are not drawn to three different mechanical devices, but to an isolated antibody that binds to a polypeptide

comprising (emphasis added) an ubiquitination-regulating domain, or a functional fragment thereof, of a human TSG101 protein comprising (emphasis added) the amino acid sequence recited in SEQ ID NO: 1. The prior art teaches an antibody which binds to a polypeptide (100% identical from amino acids 11 to 390 of SEQ ID NO: 1) comprising a ubiquitination-regulating domain comprising the amino acid sequence recited in SEQ ID NO: 1 (Li, US 5,891,668, see sequence comparison) and an antibody which binds to a polypeptide that is 100% identical (see sequence comparison) to a polypeptide comprising a ubiquitination-regulating domain comprising the amino acid sequence recited in SEQ ID NO: 1, wherein the ubiquitination-regulating domain may comprise amino acid residues 50-140, 1-140 or 140-250 of SEQ ID NO: 1. Thus, the claimed antibody appears to be the same as the prior art. As stated in the prior Office Action (pages 7 and 8), the office does not have the facilities and resources to provide the factual evidence needed in order to establish that the product of the prior art does not possess the same material, structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is on the applicant to prove that the claimed product is different from those taught by the prior art and to establish patentable differences. See In re Best 562F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray 10 USPQ 2d 1922 (PTO Bd. Pat. App. & Int. 1989). Therefore, amended claims 1, 4 and 6 remain rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (IDS, US 5,891,668, 1999) and claims 1, 4-6 and 43 remain rejected under 35 U.S.C. 102(b) as being anticipated by Brie et al. (US 5,892,016, 1999)

Therefore, NO claim is allowed

All other rejections and/or objections are withdrawn in view of applicant's amendments and arguments there to.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brandon J. Fetterolf, PhD whose telephone number is (571)-272-2919. The examiner can normally be reached on Monday through Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Siew can be reached on 571-272-0787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Brandon J Fetterolf, PhD
Examiner
Art Unit 1642

BF

JEFFREY SIEW
SUPERVISORY PATENT EXAMINER
6/22/08

Please attach + send to Applicant

us-10-053-975a-1.rai

GenCore version 5.1.6
Copyright (c) 1993 - 2005 Compugen Ltd.

OM protein - protein search, using sw model

Run on: June 15, 2005, 10:33:17 ; Search time 46.8487 Seconds
(without alignments)
621.429 Million cell updates/sec

Title: US-10-053-975A-1
Perfect score: 2047
Sequence: 1 MAVSESQLKKMVSKYKYRDL.....FQLRALMQKARKTAGLSDLY 390

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 513545 seqs, 74649064 residues

Total number of hits satisfying chosen parameters: 513545

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 100 summaries

Database : Issued_Patents_AA:*
1: /cgn2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/iaa/backfiles1.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	2047	100.0	390	2	US-08-786-999-1	Sequence 1, Appli
2	2047	100.0	390	4	US-09-216-387-1	Sequence 1, Appli
3	2047	100.0	390	4	US-09-886-319A-2	Sequence 2, Appli
4	2047	100.0	403	4	US-09-949-016-11251	Sequence 11251, A
5	2002	97.8	380	1	US-08-585-758A-4	Sequence 4, Appli
6	2002	97.8	380	1	US-08-977-818-4	Sequence 4, Appli
7	2002	97.8	380	2	US-08-670-274B-4	Sequence 4, Appli
8	2002	97.8	380	3	US-09-146-187-4	Sequence 4, Appli
9	2002	97.8	380	4	US-09-804-690-4	Sequence 4, Appli
10	1945.5	95.0	391	4	US-09-886-319A-1	Sequence 1, Appli
11	1900.5	92.8	381	1	US-08-585-758A-2	Sequence 2, Appli
12	1900.5	92.8	381	1	US-08-977-818-2	Sequence 2, Appli
13	1900.5	92.8	381	2	US-08-670-274B-2	Sequence 2, Appli
14	1900.5	92.8	381	2	US-08-786-999-3	Sequence 3, Appli
15	1900.5	92.8	381	3	US-09-146-187-2	Sequence 2, Appli
16	1900.5	92.8	381	4	US-09-216-387-3	Sequence 3, Appli
17	1900.5	92.8	381	4	US-09-804-690-2	Sequence 2, Appli

18	1404.5	68.6	285	4	US-09-886-319A-82	Sequence 82, Appl
19	1162	56.8	237	3	US-08-999-774A-8	Sequence 8, Appli
20	852.5	41.6	369	4	US-09-270-767-43042	Sequence 43042, A
21	479	23.4	90	4	US-09-513-999C-5770	Sequence 5770, Ap
22	342.5	16.7	173	4	US-09-270-767-58371	Sequence 58371, A
23	173	8.5	361	4	US-09-248-796A-16547	Sequence 16547, A
24	160	7.8	466	3	US-08-526-136-13	Sequence 13, Appl
25	160	7.8	467	4	US-09-949-016-7070	Sequence 7070, Ap
26	160	7.8	467	4	US-09-949-016-7071	Sequence 7071, Ap
27	148.5	7.3	148	4	US-09-461-325-453	Sequence 453, App
28	148.5	7.3	148	4	US-10-012-542-453	Sequence 453, App
29	148.5	7.3	148	4	US-10-115-123-453	Sequence 453, App
30	147	7.2	489	4	US-09-949-016-7068	Sequence 7068, Ap
31	147	7.2	489	4	US-09-949-016-7069	Sequence 7069, Ap
32	142	6.9	557	4	US-09-949-016-7621	Sequence 7621, Ap
33	141	6.9	905	2	US-08-574-959A-9	Sequence 9, Appli
34	141	6.9	905	3	US-09-357-014-9	Sequence 9, Appli
35	141	6.9	1135	2	US-08-574-959A-7	Sequence 7, Appli
36	141	6.9	1135	3	US-09-357-014-7	Sequence 7, Appli
37	130.5	6.4	452	4	US-09-949-016-7289	Sequence 7289, Ap
38	130.5	6.4	475	4	US-09-248-796A-14568	Sequence 14568, A
39	130	6.4	543	4	US-09-535-008-63	Sequence 63, Appl
40	130	6.4	577	4	US-09-535-008-61	Sequence 61, Appl
41	130	6.4	1646	4	US-09-535-008-67	Sequence 67, Appl
42	130	6.4	1647	4	US-09-535-008-2	Sequence 2, Appli
43	130	6.4	1647	4	US-09-824-574-4	Sequence 4, Appli
44	130	6.4	1647	4	US-09-538-092-1172	Sequence 1172, Ap
45	130	6.4	1649	4	US-09-535-008-75	Sequence 75, Appl
46	130	6.4	1650	4	US-09-535-008-71	Sequence 71, Appl
47	130	6.4	1659	4	US-09-949-016-9752	Sequence 9752, Ap
48	130	6.4	1678	4	US-09-535-008-69	Sequence 69, Appl
49	130	6.4	1679	4	US-09-535-008-65	Sequence 65, Appl
50	130	6.4	1681	4	US-09-535-008-77	Sequence 77, Appl
51	130	6.4	1682	4	US-09-535-008-73	Sequence 73, Appl
52	127	6.2	1184	4	US-09-266-225D-18	Sequence 18, Appl
53	127	6.2	1185	3	US-09-041-886-23	Sequence 23, Appl
54	127	6.2	1185	4	US-09-538-092-1209	Sequence 1209, Ap
55	126	6.2	172	4	US-09-800-729-138	Sequence 138, App
56	126	6.2	868	4	US-09-800-729-106	Sequence 106, App
57	126	6.2	921	4	US-09-800-729-199	Sequence 199, App
58	126	6.2	8991	4	US-08-714-741-32	Sequence 32, Appl
59	125.5	6.1	330	1	US-08-642-255-32	Sequence 32, Appl
60	125.5	6.1	408	1	US-07-609-716-65	Sequence 65, Appl
61	125.5	6.1	408	3	US-08-475-411A-65	Sequence 65, Appl
62	125.5	6.1	408	3	US-08-478-029A-65	Sequence 65, Appl
63	124.5	6.1	1162	2	US-08-728-323A-2	Sequence 2, Appli
64	124.5	6.1	1162	3	US-09-298-568-2	Sequence 2, Appli
65	124.5	6.1	1162	4	US-09-410-399-2	Sequence 2, Appli
66	124.5	6.1	1162	4	US-09-894-273-2	Sequence 2, Appli
67	124.5	6.1	1274	3	US-09-095-443-2	Sequence 2, Appli
68	123.5	6.0	258	4	US-09-270-767-46446	Sequence 46446, A
69	123.5	6.0	380	2	US-09-026-587-4	Sequence 4, Appli
70	123.5	6.0	380	2	US-09-227-420-4	Sequence 4, Appli
71	123.5	6.0	380	4	US-09-387-811-4	Sequence 4, Appli
72	123.5	6.0	380	4	US-09-823-240A-10	Sequence 10, Appl
73	123.5	6.0	381	4	US-09-949-016-7291	Sequence 7291, Ap
74	123.5	6.0	635	4	US-09-417-197-125	Sequence 125, App
75	123	6.0	1248	2	US-09-080-897-2	Sequence 2, Appli
76	123	6.0	1248	3	US-09-323-735-2	Sequence 2, Appli
77	122	6.0	1315	3	US-08-899-595-3	Sequence 3, Appli
78	121.5	5.9	420	4	US-09-902-540-13993	Sequence 13993, A
79	121.5	5.9	553	4	US-09-949-016-7961	Sequence 7961, Ap
80	120	5.9	777	4	US-09-949-016-8706	Sequence 8706, Ap

81	120	5.9	777	4	US-09-949-016-8707	Sequence 8707, Ap
82	119.5	5.8	503	3	US-08-526-136-2	Sequence 2, Appli
83	119.5	5.8	505	3	US-08-526-136-4	Sequence 4, Appli
84	118.5	5.8	397	4	US-09-248-796A-18882	Sequence 18882, A
85	118.5	5.8	1255	2	US-09-080-897-4	Sequence 4, Appli
86	118.5	5.8	1255	3	US-08-899-595-1	Sequence 1, Appli
87	118.5	5.8	1255	3	US-09-323-735-4	Sequence 4, Appli
88	118	5.8	214	1	US-08-217-327-4	Sequence 4, Appli
89	118	5.8	581	4	US-09-949-016-9978	Sequence 9978, Ap
90	117	5.7	416	4	US-09-690-454-136	Sequence 136, App
91	117	5.7	779	4	US-10-164-595-56	Sequence 56, Appl
92	117	5.7	843	4	US-10-164-595-54	Sequence 54, Appl
93	116.5	5.7	338	1	US-08-218-686-2	Sequence 2, Appli
94	116.5	5.7	338	3	US-08-460-242-2	Sequence 2, Appli
95	116	5.7	1461	4	US-09-585-887-9	Sequence 9, Appli
96	116	5.7	1461	4	US-09-289-578-9	Sequence 9, Appli
97	116	5.7	1464	4	US-09-331-347C-21	Sequence 21, Appl
98	115.5	5.6	357	1	US-07-609-716-66	Sequence 66, Appl
99	115.5	5.6	357	1	US-08-642-255-33	Sequence 33, Appl
100	115.5	5.6	357	3	US-08-475-411A-66	Sequence 66, Appl

RESULT 7
US-08-670-274B-4
; Sequence 4, Application US/08670274B
; Patent No. 5891668
; GENERAL INFORMATION:
; APPLICANT: LI, Limin
; APPLICANT: COHEN, Stanley N
; TITLE OF INVENTION: MAMMALIAN TUMOR SUSCEPTIBILITY GENES AND
; TITLE OF INVENTION: THEIR USES
; NUMBER OF SEQUENCES: 20
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: FISH AND RICHARDSON, P.C.
; STREET: 2200 SAND HILL ROAD
; CITY: MENLO PARK
; STATE: CA
; COUNTRY: USA
; ZIP: 94025
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/670,274B
; FILING DATE: June 13, 1996
; CLASSIFICATION: 435
; ATTORNEY/AGENT INFORMATION:
; NAME: SHERWOOD, Pamela J.
; REGISTRATION NUMBER: 36,677
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 415-781-1989
; TELEFAX: 415-398-3249
; TELEX: 910 277299
; INFORMATION FOR SEQ ID NO: 4:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 380 amino acids
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-670-274B-4

Query Match 97.8%; Score 2002; DB 2; Length 380;
Best Local Similarity 100.0%; Pred. No. 3.3e-155;
Matches 380; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
Qy          11 MVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIPVPYRGNTYNI 70
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db           1 MVSKYKYRDLTVRETVNVITLYKDLKPVLDSYVFNDGSSRELMNLTGTIPVPYRGNTYNI 60

Qy          71 PICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV 130
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          61 PICLWLLDTYPYNPPICFVKPTSSMTIKTGKHVDANGKIYLPYLHEWKHPQSDLLGLIQV 120

Qy         131 MIVVFGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPPNPSGYPGCPY 190
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         121 MIVVFGDEPPVFSRPISASYPPYQATGPPNTSYMPGMPGGISPYPSGYPPNPSGYPGCPY 180

Qy         191 PPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRWRMKEEMDRAQ 250
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         181 PPGGPYPATTSSQYPSQPPVTTVGPSRDGTISEDTIRASLISAVSDKLRWRMKEEMDRAQ 240

Qy         251 AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSSALEKMENQSE 310
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         241 AELNALKRTEEDLKKGHQKLEEMVTRLDQEVAEVDKNIELLKKKDEELSSALEKMENQSE 300

Qy         311 NNDIDEVIIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDLDVFLKHVRLLSRKQ 370
               ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         301 NNDIDEVIIPTAPLYKQILNLYAEENAIEDTIFYLGEALRRGVIDLDVFLKHVRLLSRKQ 360

Qy         371 FQLRALMQKARKTAGLSDLY 390
               ||||||||||||||||||||
Db         361 FQLRALMQKARKTAGLSDLY 380
```